

Docket No.: 25436/2412 Serial No.: 10/815,337

SEQUENCE LISTING

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Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile 50 55 60

Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro 65 70 75 80

Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val 85 90 95

Tyr Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg 100 105 110

Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr 115 120 125

Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile 130 135 140

Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val 145 150 155 160 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys 185 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr 195 200 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln 215 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 230 <210> 19 <211> 720 <212> DNA Renilla reniformis <213> <400> 19 atqqtqaqca aqcaqatcct gaagaacacc ggcctgcagg agatcatgag cttcaaggtg 60 120 aacctggagg gcgtggtgaa caaccacgtg ttcaccatgg agggctgcgg caagggcaac atcetgttcg gcaaccaget ggtgcagate cgcgtgacca agggcgcccc cetgccette 180 geettegaca teetgageee egeetteeag taeggeaace geacetteac caagtaceee 240 300 qaqqacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc 360 ctqcqctacq aqqacqqcqq cctqgtqqaq atccqcagcq acatcaacct gatcgagggg atqttcqtqt accqcqtqqa qtacaaqqqc cqcaacttcc ccaacgacgg ccccgtgatg 420 aaqaaqacca tcaccqqcct qcaqcccaqc ttcqaqqtqq tgtacatgaa cgacggcgtg 480 540 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc 600 caqcaccqcc tggagaagac ctacgtggag gacggcgct tcgtggagca gcacgagacc 660 720 gccatcgccc agctgaccag cctgggcaag ccctgggca gcctgcacga gtgggtgtaa <210> 20 <211> 239 <212> PRT Renilla reniformis <213> <400> 20 Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met

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- Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr 20 25 30
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- Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile 50 55 60
- Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro 65 70 75 80
- Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val 85 90 95
- Tyr Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg 100 105 110
- Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Glu Tyr Arg Val Glu Tyr 115 120 125
- Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile 130 135 140
- Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val 145 150 155 160
- Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe 165 170 175
- Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys 180 185 190
- Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr

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195

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Tyr Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg 100 105 110	
Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Glu Tyr Arg Val Glu Tyr 115 120 125	
Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile 130 135 140	
Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val 145 150 155 160	
Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe 165 170 175	
Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys 180 185 190	
Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr 195 200 205	
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Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val 35 40 45														
Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile 50 55 60														
Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro 75 80														
Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val 85 90 95														
Tyr Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg 100 105 110														
Ser Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr 115 120 125														
Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile 130 135 140														
Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val 145 150 155 160														
Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe 165 170 175														
Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys 180 185 190														
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Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
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Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val

Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Ala Glu Ile Arg

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60

120

180

240

300

360

420

480

540

600

660

720

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Thr Gly Leu Gln Pro Ser Phe Glu Val Val 145	Tyr Met Asn Asp Gly Val 155 160											
Leu Val Gly Gln Val Ile Leu Val Tyr Arg 165 170	Leu Asn Ser Gly Lys Phe 175											
Tyr Ser Cys His Met Arg Thr Leu Met Lys 180 185	Ser Lys Gly Val Val Lys 190											
Asp Phe Pro Glu Tyr His Phe Ile Gln His 195 200	Arg Leu Glu Lys Thr Tyr 205											
Val Glu Asp Gly Gly Phe Val Glu Gln His 210 215	Glu Thr Ala Ile Ala Gln 220											
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Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile 50 55 60

Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro 65 70 75 80

Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val 85 90 95

Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg 100 105 110

Ser Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr 115 120 125

Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile 130 135 140

Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val 145 150 155 160

Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Cys Gly Lys Phe
165 170 175

Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys 180 185 190

Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr 195 200 205

Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln 210 215 220

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Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60

Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80

Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr 85 90 95

Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110

Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125

Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr 130 135 140 Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 185 Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu 215 Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 230 <210> 33 714 <211> <212> DNA Renilla reniformis <213> <400> 33 atqaqtaaac aaatattqaa gaacactgga ttgcaggaga tcatgtcgtt taaagtgaat 60 120 ctggaaggtg tagtaaacaa tcatgtgttc acaatggaag gttgtggaaa aggaaatatt 180 ttattaggaa accaactggt tcagattcgt gtcacaaaag gggctccgct tccatttgca tttgatattc tctcaccagc tttccaatac ggcaaccgta cattcacgaa atacccggag 240 qatatatcaq actittitat acaatcatti ccaqcqqqat tigtatacqa aagaacgitg 300 360 cqttacqaaq atqqtqqact qqttqaaatc cqttcagata taaatttaat cgaggagatg 420 tttgtctaca gagtggaata taaaggtagt aacttcccga atgatggtcc agtgatgaag aagacaatca caggattaca accttcgttc gaagttgtgt atatgaacga tggcgtcttg 480 gttggccaag tcattcttgt ttatagatta aactctggca aattttattc gtgtcacatg 540 agaacactga tgaaatcaaa gggtgtagtg aaggattttc ccgaatacca tttcattcaa 600 catcgtttag agaagacgta tgtggaagac ggaggttttg ttgaggaaca cgagacggcc 660 attgctcaac tgacatcgct ggggaaacca cttggatcct tacacgaatg ggtt 714 <210> <211> 238 <212> PRT

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Renilla reniformis

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Glu Gl	ly Cys 35	Gly	Lys	Gly	Asn	Ile 40	Leu	Leu	Gly	Asn	Gln 45	Leu	Val	Gln	
Ile Ar	rg Val	Thr	Lys	Gly	Ala 55	Pro	Leu	Pro	Phe	Ala 60	Phe	Asp	Ile	Leu	
Ser Pr 65	ro Ala	Phe	Gln	Tyr 70	Gly	Asn	Arg	Thr	Phe 75	Thr	Lys	Tyr	Pro	Glu 80	
Asp Il	le Ser	Asp	Phe 85	Phe	Ile	Gln	Ser	Phe 90	Pro	Ala	Gly	Phe	Val 95	Tyr	
Glu Ar	rg Thr	Leu 100	Arg	Tyr	Glu	Asp	Gly 105	Gly	Leu	Val	Glu	Ile 110	Arg	Ser	
Asp Il	le Asn 115	Leu	Ile	Glu	Glu	Met 120	Phe	Val	Tyr	Arg	Val 125	Glu	Tyr	Lys	
Gly Se	er Asn 30	Phe	Pro	Asn	Asp 135	Gly	Pro	Val	Met	Lys 140	Lys	Thr	Ile	Thr	
Gly Le	eu Gln	Pro	Ser	Phe 150	Glu	Val	Val	Tyr	Met 155	Asn	Asp	Gly	Val	Leu 160	
Val Gl	ly Gln	Val	Ile 165	Leu	Val	Tyr	Arg	Leu 170	Asn	Ser	Gly	Lys	Phe 175	Tyr	
Ser Cy	ys His	Met 180	Arg	Thr	Leu	Met	Lys 185	Ser	Lys	Gly	Val	Val 190	ГÀЗ	Asp	
Phe Pr	ro Glu 195	_	His	Phe	Ile	Gln 200	His	Arg	Leu	Glu	Lys 205	Thr	Tyr	Val	
	sp Gly 10	Gly	Phe	Val	Glu 215	Glu	His	Glu	Thr	Ala 220	Ile	Ala	Gln	Leu	
Thr Se	er Leu	Gly	Lys	Pro 230	Leu	Gly	Ser	Leu	His 235	Glu	Trp	Val			
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											-			gtgaat	120
														tttgca	180
					_	_	_					_			240
cccyal	Lall	LULC	acca	الا تا	LLUC	aald	- 99	Jaaci	yua	cat	ccac	yaa i	acaci	ccggag	240

gatatatcag actttttat acaatcattt ccagcgggat ttgtatacga aagaacgttg 300 cqttacgaag atggtggact ggttgaaatc cqttcaqata taaatttaat cgaggggatg 360 tttgtctaca qaqtqqaata taaaggtagt aacttcccqa atqatqqtcc aqtgatqaag 420 aaqacaatca caggattaca accttcgttc gaagttgtgt atatgaacga tggcgtcttg 480 gttggccaag tcattcttgt ttatagatta aactctggca aattttattc gtgtcacatg 540 agaacactga tgaaatcaaa gggtgtagtg aaggattttc ccgaatacca tttcattcaa 600 catcgtttag agaagacgta tgtggaagac ggaggttttg tagaggaaca cgagacggcc 660 attgeteaac tgacateget ggggaaacca ettggateet tacaegaatg ggtt 714

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- <212> PRT
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Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln
35 40 45

Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60

Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80

Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr 85 90 95

Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110

Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125

Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr 130 135 140

Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu 145 150 155 160

Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr 165 170 175 Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 185 180 Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val 200 Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu 215 210 Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 225 230 <210> 37 714 <211> <212> DNA <213> Renilla reniformis <400> 37 atgagtaaac aaatattgaa gaacactgga ttgcaggaga tcatgtcqtt taaaqtqaat 60 ctqqaaqqtq taqtaaacaa tcatqtqttc acaatqqaaq gttqtggaaa aggaaatatt 120 ttattcqqaa accaactqqt tcaqattcqt qtcacaaaaq gggctccgct tccatttgca 180 tttgatattc tctcaccagc tttccaatac ggcaaccgta cattcacgaa atacccggag 240 gatatatcag actttttat acaatcattt ccagcgggat ttgtatacga aagaacgatg 300 360 cgttacgaag atggtggact ggttgaaatc cgttcagata taaatttaat cgaggagatg tttgtctaca gagtggaata taaaggtagt aacttcccga atgatggtcc agtgatgaag 420 aaqacaatca caqqattaca accttcqttc qaaqttqtqt atatqaacqa tqqcqtcttq 480 gttggccaag tcattcttgt ttatagatta aactctggca aattttattc gtgtcacatg 540 agaacactga tgaaatcaaa gggtgtagtg aaggattttc ccgaatacca tttcattcaa 600 catcgtttag agaagacgta tgtggaagac ggaggttttg ttgaggaaca cgagacggcc 660 714 attgctcaac tgacatcgct ggggaaacca cttggatcct tacacgaatg ggtt <210> 38 <211> 238 <212> PRT <213> Renilla reniformis <400> 38 Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln

Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60												
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80												
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr 85 90 95												
Glu Arg Thr Met Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110												
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125												
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr 130 135 140												
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu 145 150 155 160												
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr 165 170 175												
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 180 185 190												
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val 195 200 205												
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu 210 215 220												
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 225 230 235												
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ttatccggaa accaactggt tcagattcgt gtcacaaaag gggctccgct tccatttgca	180											
tttgatattc tctcaccagc tttccaatac ggcaaccgta cattcacgaa atacccggag	240											
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tttgtctaca gagtggaata taaaggtagt aacttcccga atgatggtcc agtgatgaag	420											

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Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser

100 105 110 arg Tyr Giu Asp Gly Gly Leu val Giu 11e Arg Ser

Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125

Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr 130 135 140

Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu 145 150 155 160

Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr 165 170 175

Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 180 185 190

Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val

Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu

210 215 220

Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 225 230 235

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<213> Renilla reniformis

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<211> 238

<212> PRT

<213> Renilla reniformis

<400> 42

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Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met 20 25 30

Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln 35 40 45

Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60

Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80

A	sp	Ile	Ser	Asp	Phe 85	Phe	Ile	Gln	Ser	Phe 90	Pro	Ala	Gly	Phe	Val 95	Tyr	
G	lu	Arg	Thr	Leu 100	Cys	Tyr	Glu	Asp	Gly 105	Gly	Leu	Val	Glu	Ile 110	Arg	Ser	
A	sp	Ile	Asn 115	Leu	Ile	Glu	Glu	Met 120	Phe	Val	Tyr	His	Val 125	Glu	Tyr	Lys	
G	ly	Ser 130	Asn	Phe	Pro	Asn	Asp 135	Gly	Pro	Val	Met	Lys 140	Lys	Thr	Ile	Thr	
	ly 45	Leu	Gln	Pro	Ser	Phe 150	Glu	Val	Val	Tyr	Met 155	Asn	Asp	Gly	Val	Leu 160	
V	al	Gly	Gln	Val	Ile 165	Leu	Val	Tyr	Arg	Leu 170	Asn	Ser	Gly	Lys	Phe 175	Tyr	
s	er	Cys	His	Met 180	Arg	Thr	Leu	Met	Lys 185	Ser	Lys	Gly	Val	Val 190	Lys	Asp	
P	he	Pro	Glu 195	Tyr	His	Phe	Ile	Gln 200	His	Arg	Leu	Glu	Lys 205	Thr	Tyr	Val	
G	lu	Asp 210	Gly	Gly	Phe	Val	Glu 215	Glu	His	Glu	Thr	Ala 220	Ile	Ala	Gln	Leu	
	hr 25	Ser	Leu	Gly	Tyr	Pro 230	Leu	Gly	Ser	Leu	His 235	Glu	Trp	Val			
< <		L>		lla :	reni:	form:	is										
	400		43		- -			a b ~ ~ ~	- -	~~~~	~~~	+		~++	+	****	: 60
		_			_	_										gtgatt	
	-	_		_				_				_				aatatt	
																ttgca	
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g	ttç	ggcc	aag	tcat	tctt	gt t	tata	gatt	a aa	ctct	ggca	aat	ttta	ttc	gtgt	cacato	540
а	gaa	acac	tga	tgaa	atca	aa g	ggtg	tagt	g aa	ggat	tttc	ccg	aata	cca	tttca	attcaa	a 600
С	ato	gtt	tag .	agaa	gacg	ta t	gtgg	aaga	c gg	aggt	tttg	ttg	agga	aca	cgaga	acggco	660

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- <210> 44
- <211> 238
- <212> PRT
- <213> Renilla reniformis
- <400> 44
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- Phe Lys Val Ile Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met 20 25 30
- Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln 35 40 45
- Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60
- Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80
- Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr 85 90 95
- Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110
- Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125
- Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile Thr 130 135 140
- Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu 145 150 155 160
- Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr 165 170 175
- Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 180 185 190
- Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val 195 200 205
- Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu 210 215 220
- Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 225 230 235
- <210> 45 <211> 714

- <212> DNA
- <213> Renilla reniformis
- <400> 45
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- 120 ctggaaggtg tagtaaacaa tcatgtgttc acaatggaag gttgtggaaa aggaaatatt ttatteggaa accaactggt teagattegt gteacaaaag gggeteeget teeatttgea 180 tttgatattc tctcaccagc tttccaatac ggcaaccgta cattcacgaa atacccggag 240 gatatatcag actttttat acaatcattt ccagcgggat ttgtatacga aagaacgttg 300 cgtttcgaag atggtggact ggttgaaatc cgttcagata taaatttaat cgaggagatg 360 tttqtctaca qaqtqqaata taaaqqtaqt aacttcccga atgatqqtcc agtgatqaaq 420 aaqacaatca caqqattaca accttcqttc qaaqttgtgt atatgaacga tggcgtcttg 480 qttqqccaaq tcattcttqt ttataqatta aactctqqca aattttattc qtqtcacatq 540 agaacactga tgaaatcaaa gggtgtagtg aaggattttc ccgaatacca tttcattcaa 600

660

714

- <210> 46
- <211> 238
- <212> PRT
- <213> Renilla reniformis
- <400> 46
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attgctcaac tgacatcgct ggggaaacca cttggatcct tacacgaatg ggtt

- Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met 20 25 30
- Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln 35 40 45
- Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60
- Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 70 , 75 80
- Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr
 85 90 95
- Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110
- Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys

115	120	125
Gly Ser Asn Phe Pro Asn Asp 130 135	Gly Pro Val Met Lys	
Gly Leu Gln Pro Ser Phe Glu 145 150	Val Val Tyr Met Asr 155	n Asp Gly Val Leu 160
Val Gly Gln Val Ile Leu Val 165	Tyr Arg Leu Asn Ser 170	r Gly Lys Phe Tyr 175
Ser Cys His Met Arg Thr Leu 180	Met Lys Ser Lys Gly 185	y Val Val Lys Asp 190
Phe Pro Glu Tyr His Phe Ile 195	Gln His Arg Leu Glu 200	u Lys Thr Tyr Val 205
Glu Asp Gly Gly Phe Val Glu 210 215	Glu His Glu Thr Ala	
Thr Ser Leu Gly Lys Pro Leu 225 230	Gly Ser Leu His Glu 235	u Trp Val
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ttattcqqaa accaactqqt tcagat		
tttgatattc tctcaccagc tttcca		3 3
gatatatcag actttttat acaatc		33 3
cgtttcgaag atggtggact ggttga		3
tttgtctaca gagtggaata taaagg		3 33 3 3
aagacaatca caggattaca acctto		
gttggccaag tcattcttgt ttatag		3 3 3
agaacactga tgaaatcaaa gggtgt		
catcgtttag agaagacgta tgtgga	aagac ggaggttttg tt	
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Ser Pro 65	Ala	Phe	Gln	Tyr 70	Gly	Asn	Arg	Thr	Phe 75	Thr	Lys	Tyr	Pro	Glu 80		
Asp Ile	Ser	Asp	Phe 85	Phe	Ile	Gln	Ser	Phe 90	Pro	Ala	Gly	Phe	Val 95	Tyr		
Glu Arg	Thr	Leu 100	Arg	Phe	Glu	Asp	Gly 105	Gly	Leu	Val	Glu	Ile 110	Arg	Ser		
Asp Ile	Asn 115	Leu	Ile	Glu	Glu	Met 120	Phe	Val	Tyr	Arg	Val 125	Glu	Tyr	Lys		
Gly Ser 130	Asn	Phe	Pro	Asn	Asp 135	Gly	Pro	Val	Met	Lys 140	Lys	Thr	Ile	Thr		
Gly Leu 145	Gln	Pro	Ser	Phe 150	Glu	Val	Val	Tyr	Met 155	Asn	Asp	Gly	Val	Leu 160		
Val Gly	Gln	Val	Ile 165	Leu	Val	Tyr	Arg	Leu 170	Asn	Ser	Gly	Lys	Phe 175	Tyr		
Ser Cys	His	Met 180	Arg	Thr	Leu	Met	Lys 185	Ser	Lys	Gly	Val	Val 190	Lys	Asp		
Phe Pro	Glu 195	Tyr	His	Phe	Ile	Gln 200	His	Arg	Leu	Glu	Lys 205	Thr	Tyr	Val		
Glu Asp 210	Gly	Gly	Phe	Val	Glu 215	Glu	His	Glu	Thr	Ala 220	Ile	Ala	Gln	Leu		
Thr Ser 225	Leu	Gly	Lys	Pro 230	Leu	Gly	Ser	Leu	His 235	Glu	Trp	Val				
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atgagta																
ctggaag	gtg 1	tagta	aaac	aa t	catg	tgtt	c ac	aatg	gaag	gtt	gtgg	aaa (agga	aatatt	12	20

Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser

Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Pro Met

Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln

25

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<212> PRT

<213> Renilla reniformis

<400> 50

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1 10 15

Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met 20 25 30

Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln 35 40 45

Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu 50 55 60

Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu 65 70 75 80

Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr 85 90 95

Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser 100 105 110

Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys 115 120 125

Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr 130 135 140

Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu 145 150 155 160

Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr 165 170 175
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp 180 185 190
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val 195 200 205
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu 210 215 220
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val 225 230 235
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